

PULMONOLOGY

REQUIREMENTS FOR POST-IMM TRAINING

P

**TOTAL DURATION OF TRAINING FIVE YEARS
(INCLUDING THREE YEARS OF PULMONOLOGY TRAINING)**

**NOTE: THE CURRICULUM IS APPLICABLE TO BATCHES ENTERING
PULMONOLOGY TRAINING IN JULY 2024 & ONWARDS**



**COLLEGE OF
PHYSICIANS AND
SURGEONS
PAKISTAN**

2024

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The College of Physicians and Surgeons Pakistan would appreciate any criticism, suggestions, advice from the readers and users of this document. Comments may be sent in writing or by e-mail to the CPSP at:

DIRECTORATE OF NATIONAL RESIDENCY PROGRAM (DNRP)

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ABOUT THE COLLEGE

The College was established in 1962 through an ordinance of the Federal Government. The objectives/functions of the College include promoting specialist practice of Medicine and Allied, Surgery and Allied, Obstetrics & Gynaecology, and other specialties by securing improvement of teaching and training, arranging postgraduate medical, surgical and other specialists training, providing opportunities for research, holding and conducting examinations for awarding College diplomas and admission to the fellowship of the College.

Since its inception, the College has taken great strides in improving postgraduate medical & dental education in Pakistan. Competency-based structured Residency Programs have now been developed, along with criteria for accreditation of training institutions, and for the appointment of supervisors and examiners. The format of examinations has evolved over the years to achieve greater objectivity and reliability in methods of assessment. The recognition of the standards of College qualifications nationally & internationally, particularly of its fellowship, has enormously increased the number of trainees and consequently the number of training institutions and the supervisors. The rapid increase in knowledge base of medical sciences and consequent emergence of new sub-specialties have gradually increased the number of CPSP fellowship disciplines to eighty five including specialties in dentistry.

After completing two years of core training during IMM, the trainees are allowed to proceed to the advance phase of FCPS training in the specific specialty of choice for 2-3 years. However, it is mandatory to qualify IMM examination before taking the FCPS-II exit examination. The work performed by the trainee is to be recorded in the e-logbook on daily basis. The purpose of the e-log is to ensure that the entries are made on a regular basis and to avoid belated and fabricated entries. It will hence promote accuracy, authenticity and vigilance on the part of trainees and the supervisors.

The average number of candidates taking CPSP examinations each year is to a minimum of 32,000. The College conducts examinations for FCPS-I (11 groups of disciplines), IMM, FCPS-II (85 disciplines), MCPS (22 disciplines), including MCPS in Health Professions Education & Health Care System Management. A large number of fellows and senior medical teachers from within the country and overseas are involved at various levels of examinations of the College.

The College, in its endeavor to decrease inter-rater variability and increase fairness and transparency, is using TOACS (Task Oriented Assessment of Clinical Skills) in IMM and FCPS-II Clinical examinations. Inclusion of foreign examiners adds to the credibility of its qualification at an international level. It is important to note that in the overall scenario of health delivery over 85% of the total functioning and registered health care specialists of the country have been provided by the CPSP. To coordinate training and examination, and provide assistance to the candidates stationed in cities other than Karachi, the College has established 14 Regional Centers (including five Provincial Headquarter Centers) in the country. The five Provincial Headquarter Centers, in addition to organizing the capacity building workshops/short courses also have facilities of libraries, I.T, and evaluation of synopsis and dissertations along with providing guidance to the trainees in conducting their research work. The training towards fellowship can be undertaken in more than 341 accredited medical institutions throughout the country and 93 accredited institutions abroad. The total number of trainees in these institutions is over 38,270 who are completing residency programs with around 6,048 supervisors. These continuous efforts of the College have even more importantly developed a credible system of postgraduate medical education for the country. The College strives to make its courses and training programs 'evidence' & 'needs based' so as to meet international standards as well as to cater to the specialist healthcare needs not only for this country but also for the entire region.

Prof. Mohammad Shoaib Shafi

President,

College of Physicians and Surgeons Pakistan

FELLOWSHIP DISCIPLINES

The list of fellowship programmes, first and second fellowship, are given below:

Disciplines for First Fellowship

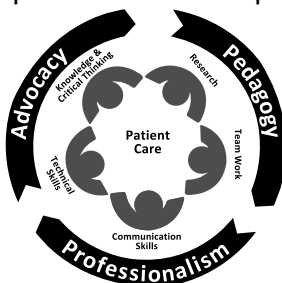
1. Anatomy	24. Nuclear Medicine
2. Anesthesiology	25. Obstetrics And Gynaecology
3. Biochemistry	26. Operative Dentistry & Endodontics
4. Cardiac Surgery	27. Ophthalmology
5. Cardiology	28. Oral & Maxillofacial Surgery
6. Cardio Thoracic Anaesthesia	29. Orthodontics
7. Chemical Pathology	30. Orthopaedic Surgery
8. Clinical Haematology	31. Otorhinolaryngology (ENT)
9. Community Medicine	32. Paediatric Surgery
10. Dermatology	33. Paediatrics
11. Diagnostic Radiology	34. Periodontology
12. Emergency Medicine	35. Pharmacology and Therapeutics
13. Family Medicine	36. Physical Medicine & Rehabilitation
14. Forensic Medicine	37. Physiology
15. Haematology	38. Plastic Surgery
16. Histopathology	39. Prosthodontics
17. Immunology	40. Psychiatry
18. Medicine	41. Pulmonology
19. Medical Oncology	42. Radiation Oncology
20. Microbiology	43. Surgery
21. Nephrology	44. Thoracic Surgery
22. Neurology	45. Urology
23. Neurosurgery	46. Virology

Disciplines for Second Fellowship

1. Breast Surgery	21. Paediatric Critical Care Medicine
2. Child and Adolescent Psychiatry	22. Paediatric & Congenital Cardiac Surgery
3. Clinical Cardiac Electrophysiology	23. Paediatric Endocrinology & Diabetes
4. Community & Preventive Paediatrics	24. Paediatric Dermatology
5. Colorectal Surgery	25. Paediatric Gastroenterology and Hepatology
6. Critical Care Medicine	26. Paediatric Haematology Oncology
7. Cytopathology	27. Paediatric Infectious Diseases
8. Developmental and Behavioural Paediatrics	28. Paediatric Nephrology
9. Endocrinology	29. Paediatric Neurology
10. Gastroenterology	30. Paediatric Ophthalmology and Strabismus
11. Gynecological Oncology	31. Pain Medicine
12. Hepato-Pancreato-Biliary and Liver Transplant Surgery	32. Palliative Medicine
13. Infectious Diseases	33. Reproductive Endocrinology and Infertility
14. Interventional Cardiology	34. Rheumatology
15. Interventional Radiology	35. Spine Surgery
16. Maternal and Fetal Medicine (MFM)	36. Surgical Oncology
17. Molecular Pathology and Cytogenetics	37. Urogynaecology
18. Neonatal Paediatrics	38. Vitreo Retinal Ophthalmology
19. Orbit And Oculoplastics	39. Vascular Surgery
20. Paediatric Cardiology	

CPSP COMPETENCY MODEL

College of Physicians and Surgeons Pakistan has moved to competency-based medical education and has developed its own competency model shown below. A generic explanation of the model is given below and it is expected that all its residency training programmes follow the components of this model in accordance to the requirements of each specialty.



Patient or population care occupies the pivotal center. Patient care includes all clinical skills such as history taking, physical examination, ordering investigations, making diagnoses and managing the care. The inner leaves of the model represent the five major competencies directly related to patient care, while the three competencies in the outer circle are mega-competencies related to patient care and also incorporate education, professionalism, leadership, advocacy and population health.

By the end of the Residency Programme, residents are expected to acquire these competencies and their constituent learning outcomes, and provide promotive, preventive, curative and rehabilitative patient-centered (or population-centered) care.

Inner Leaves:

1. Knowledge and Critical Thinking
2. Technical Skills
3. Communication Skills
4. Teamwork
5. Research

Outer Leaves:

6. Professionalism
7. Pedagogy
8. Advocacy

1. Knowledge and Critical Thinking

- Demonstrate application of wide and current readings to critical thinking and problem solving
- Relate the alteration of body function to the presenting condition
- Interpret and integrate history and examination findings to arrive at an appropriate provisional and credible differential diagnoses
- Sequentially order, justify and interpret appropriate investigations
- Apply knowledge and reasoning skills to
 - Analyze data for problem identification and to rule in and rule out contending conditions
 - Synthesize and evaluate solutions for decision-making in solving familiar and less familiar problems based on best current evidence
 - Prioritize different problems within a time frame
 - Select, outline and provide, with evidence-based justifications, appropriate pharmacological and non-pharmacological management strategies
 - Assess new medical knowledge and apply it to resolve patient problems (Evidence-based practice)
 - Apply quality assurance procedures in daily work (Professionalism)
 - Demonstrate shared-decision-making with the patient or family
 - Provide cost-effective care while ordering investigations and in management
 - Use resources appropriately
 - Demonstrate awareness of bio-psycho-social factors in assessment and management of a patient

2. Technical Skills

- Demonstrate International Patient Safety Goals (IPSG)
- Demonstrate competent performance of all required technical skills and procedures in the specialty, including:
 - Obtaining informed consent
 - Preoperative planning
 - Pre-interventional care and preparation
 - Intra-Intervention techniques including exposure and closure, global & task specific items, and communication and teamwork skills
 - Post-interventional care
 - Follow-up care

3. Communication Skills

Written Communication Skills:

- Maintain clear, concise, accurate & updated medical records
- Write:
 - Cogent, clear progress notes documenting working diagnosis & status of diagnostic evaluation
 - Clear, focused, evidence-based & logical management plans and discharge summaries
 - Respectful, clear & focused letters and referrals to other colleagues

Verbal and other Non-verbal Communication Skills:

- Clear, focused and logical presentation of cases
- Demonstrate:
 - Effective interpersonal communication skills by being clear, considerate and sensitive towards patients, their relatives, other physicians, health professionals, team members, colleagues, students and the public
 - Empathy & respect towards patients & their relatives
 - Effective counseling of the patient and the family with cultural sensitivity by explaining options, educating them & promoting joint decision-making
 - Appropriate verbal & body language on the campus and all work situations including seminars, bedside sessions, outpatient sessions and others
 - Respect and tolerance for all health care professionals, including peers, juniors and seniors
 - Appropriate conflict resolution & management skills

4. Teamwork

- Demonstrate constructive team-communication skills
- Facilitate collaborative group interaction as a team member to build strong teams demonstrating respect, tolerance and interdependence
- Support other team members to grow
- Demonstrate willingness to assume responsibility and leadership as needed

5. Research

- Interpret and use results of various research studies (critical appraisal)
- Conduct a research study individually or in a group by using appropriate
 - Selection of research question(s) and objectives
 - Research design and statistical methods to answer the research question
 - Ethical and REU approval of the synopsis
- Demonstrate competence in academic writing by writing an appropriate dissertation and/or publishing research article(s) as a step towards resolving issues or concerns in their specialty
- Guide others in conducting research by advising about research methodology including study designs and statistical methods
- Demonstrate clear, focused & logical presentations of their research

6. Professionalism

- Demonstrate the highest level of personal integrity: honesty, punctuality, regularity, timely task completion
- Deal with all patients in a non-discriminatory, prejudice-free manner, demonstrating the same level of care for every human being irrespective of gender, age, ethnic background, culture, socioeconomic status & religion
- Establish a trusting relationship with patients, their relatives and care-givers
- Deal with all patients with honesty, empathy & compassion, putting patients' needs first (altruism)

- Facilitate transfer of information important for promotion of health, prevention and management of disease
- Encourage questioning by the patient and be receptive to feedback
- Pursue self-directed and life-long learning. Keep abreast of medical literature and assess new knowledge and apply it to resolve patient problems
- Know one's limitations and ask for help as needed from colleagues, consultations or referrals
- Apply quality assurance procedures for improvement in daily work
- Be a role model for others

Ethics

- Maintain patient autonomy by demonstrating shared-decision-making with the patient and/or family
- Obtain informed consent, maintain patient confidentiality and do no harm
- Provide cost-effective care while ordering investigations and in management and use resources appropriately

Leadership

- Demonstrate accountability for their decisions and actions, and that of their team
- Demonstrate willingness to assume leadership role(s) when needed in given situations or events (rush call/code)
- Change and bring about change as necessary, as a leader or supportive leader

7. Pedagogy

- Demonstrate effective teaching skills, including clinical and community-based teaching, using diverse strategies
- Apply theories regarding learning and education in teaching practices
- Practice effective teaching methods, including the use of technology and multimedia tools to enhance learning experiences
- Mentor junior colleagues and residents, providing guidance and support
- Provide constructive feedback to resident learners

- Participate in continuous professional development through workshops and courses
- Reflect on teaching experiences for personal growth and improvement
- Lead educational initiatives & foster an inclusive learning environment

8. Advocacy

Advocacy is needed at multiple levels.

- Advocacy for the Patient:
 - Act as advocates for patients to ensure they are not lost in the system
 - Deliver timely care, prioritizing the patient's needs first
- Advocacy for the Practice:
 - Highlight limitations & issues within the service or practice
 - Identify solutions to problems and recommend and implement improvements for the practice(s) and institutional system(s)
- Advocacy for the Health System and Society:
 - Describe one's role in the health system(s) & contribute to building strong referral systems
 - Prioritize patient and community interests above personal or professional interests
 - Advocate for the elimination of social determinants of ill health
 - Advocate for the prevention of serious illnesses within one's specialty/sub-specialty
- Advocacy for the Profession:
 - Strive to build public trust in the medical & dental profession
 - Demonstrate efforts to improve and enhance the profession, specialty, and sub-specialty
 - Serve as conscientious gatekeepers of one's profession, specialty, and sub-specialty

GENERAL REGULATION

Candidate will be admitted to the examination in the name (surname and other names) as given in the MBBS degree. CPSP will not entertain any application for change of name on the basis of marriage/divorce/deed.

ELIGIBILITY REQUIREMENTS FOR ENTERING THE FELLOWSHIP TRAINING PROGRAM IN PULMONOLOGY

- Passed FCPS Part-I in Medicine & Allied or granted exemption
- Completed two years RTMC registered training of Intermediate Module (IMM) in Medicine & Allied

DURATION OF TRAINING

The total duration of the training is 5 years divided into the following two phases:

- Intermediate Module (IMM) in Medicine & Allied for the first two years, after which the trainee is required to appear in the IMM Examination. For further details about the Intermediate Module refer to the booklet titled "Intermediate Module in Medicine & Allied" published separately by the College
- The last three years consist of FCPS-II training in Pulmonology with prescribed rotations

All training inclusive of rotations is to be completed one month before the date of the theory examination for FCPS-II.

APPROVED TRAINING CENTERS

Training must be undertaken in units, departments and institutions approved by the College. A current list of approved institutions is available from the College and its Regional Centers as well as on the College website: www.cpsp.edu.pk

REGISTRATION AND SUPERVISION

All training must be supervised and residents are required to register with the RTMC and submit the name of their supervisor(s) by the date indicated on the registration form. The supervisor will normally be a Fellow of the College.

RESEARCH

Vide notification no. CPSP/Sec/2024/45 dated 15th March, 2024, the residents inducted in first fellowship programs from 2024 & onwards, shall be required to either submit a dissertation or get one research paper accepted for publication on a topic related to the field of specialization.

- Synopsis of the dissertation or research paper must be approved by the Research & Evaluation Unit (REU) of CPSP before starting the research work
- The completed dissertation must be submitted for approval to the REU, six months before the final FCPS-II examination intended to appear in
- The certificate of approval of the dissertation by REU or evidence of publication/acceptance for publication of one research paper in a CPSP approved journal must be submitted along with the final FCPS-II Examination form

In accordance to the same notification, residents inducted in the CPSP 1st fellowship programs from January 2025 and onwards, will be required to obtain acceptance for publication of one research paper only, in a CPSP approved journal, for appearing in final fellowship examination.

ROTATIONS

The specialty of Pulmonology prescribes its residents to acquire competencies in following areas in addition to the training in the primary specialty:

- | | |
|------------------------------|-----------|
| • Critical Care Medicine/ICU | 03 months |
| • Cardiology | 01 month |
| • Thoracic Surgery | 01 month |
| • Diagnostic Radiology | 01 month |

Rotational Policy:

CPSP wishes to be more Resident friendly in its policies regarding rotations as given below:

- CPSP prefers that all rotations must be completed within the same hospital in which the primary specialist training unit is located
- In case, a specific rotational unit is not present in a given hospital but the primary unit is capable to deal with competencies related to those rotations, the parent supervisor can verify the entries for those rotational

competencies and there will be no need to send the residents to a rotational unit outside the parent hospital

- The Residents will be sent for rotations outside the parent hospital only in cases where the acquisition of rotational competencies in parent hospital is not possible. The rotational competencies are laid down in the curriculum by the Faculty of the program. The parent supervisor shall make the requisition for the rotation to a specific center within the same city, preferably to a hospital with which an MoU is already signed. The duly approved supervisor of that rotational unit will supervise and verify the entries made by the resident and, shall also issue a rotation completion certificate (to be countersigned by the parent supervisor)
- The primary responsibility of verification of e-portal entries shall be of the rotational supervisor (if any), but the e-portal entries shall also be visible to the parent supervisor
- No resident, including for elective rotation, will be sent for rotation outside the city without prior permission of the Competent Authority, processed through NRP committee

MANDATORY WORKSHOPS AND COURSE

It is mandatory for all trainees to attend the following CPSP certified workshops in the first two years of Intermediate Module training:

1. Introduction to Computer and Internet
2. Research Methodology Biostatistics & Dissertation Writing
3. Communication Skills
4. BLS (Basic Life Support) Course

Any other workshop/s as may be introduced by the CPSP

NOTE:

- The workshops are conducted by the Directorate of Medical Education and the candidates are advised to get registered online. The BLS course is conducted by the Advanced Skills Department (ASD) and the registration form is to be submitted with the ASD separately
- No candidate will be allowed to appear in IMM examination without attending the above mentioned workshops and BLS course

E-LOGBOOK

The CPSP council has made e-logbook system mandatory for all Residency program trainees inducted from July 2011. Upon registration with RTMC each trainee is allotted a registration number and a password to log on and make entries of all work performed and the academic activities undertaken in e-logbook on a daily basis. The concerned supervisor is required to verify the entries made by the trainee. This system ensures timely entries by the trainee and prompt verification by the supervisor. It also helps in monitoring the progress of trainees and the vigilance of the supervisors.

AWARD OF FELLOWSHIP

Fellowship of the College of Physicians and Surgeons Pakistan is awarded to those applicants who have:

- A recognized medical degree
- Completed one year house job in an institution recognized by PMDC/PMC
- Passed the relevant FCPS Part-I examination or granted exemption
- Registered with the Research & Training Monitoring Cell (RTMC)
- Undergone specified years of supervised accredited Training on whole time basis
- Passed IMM examination in Medicine & Allied
- Declared successful in final fellowship examinations carried out by the examination department of the CPSP
- For Inductees of January & July 2024
Obtained a certificate of approval of dissertation or acceptance for publication of one research paper in a CPSP approved journal
- For Inductees of January 2025 and Onwards
Obtained acceptance for publication of one research paper in a CPSP approved journal
- Elected by the college council

It is important to note that all applicants must undergo a formal examination before being offered fellowship of the relevant specialty, except in case of fellowship without examination.

TRAINING ENQUIRES AND REGISTRATION

All residents should notify the College in writing of any change of address and proposed changes in training (such as change of Supervisor, change of department, break in training etc.) as soon as possible.

ROLES AND RESPONSIBILITIES SUPERVISORS

Supervision of a resident is a multifaceted job. Arbitrarily the task is divided into the following components for the sake of convenience. This division is by no means exhaustive or rigid. It is merely meant to give semblance to this abstract and versatile role.

EXPERT TRAINER

- This is the most fundamental role of a supervisor. S/he has to not only ensure and monitor adequate training but also provide continuous helpful feedback (formative) regarding the progress of the training
- This would entail observing the resident's performance and rapport with all the people within his/her work environment
- S/he should teach the residents and help them overcome the hurdles during the learning process
- It is the job of the supervisor to make the residents develop the ability to interpret findings in their patients and act suitably in response
- The supervisor must be adept at providing guidance in writing dissertation / research articles (which are essential components of training)
- Every supervisor is required to participate actively in Supervisors' workshops, conducted regularly by CPSP, and do his/her best to implement the newly acquired information/skills in the training. It is his/her basic duty to keep abreast of the innovations in the field of expertise and ensure that this information percolates to residents of all years under him/her

RELIABLE LIAISON

- The supervisor must maintain regular contact with the College regarding training and the conduct of various mandatory workshops and courses
- It is expected that the supervisor will establish direct contact with relevant quarters of CPSP if any problem arises during the training process, including the suitability of resident
- S/he must be able to coordinate with the administration of his/her institution/organization in order to ensure that his/her residents do not have administrative problems hampering their training

PROFICIENT ADMINISTRATOR

- The supervisor must ensure that the residents regularly fill their e-logbook
- S/he must provide quarterly feedback regarding each resident through e-log system
- S/he might be required to submit confidential reports on resident's progress to the College
- The supervisor should notify the College of any change in the proposed approved training program
- In case the supervisor plans to be away for more than two months, he/she must arrange satisfactory alternate supervision during the period

ROLES AND RESPONSIBILITIES RESIDENTS

Given the provision of adequate resources by the institution, residents should

- Accept responsibility for their own learning & ensure that it is in accord with the requirements of the particular discipline
- Play an informed role in the selection of the supervisor
- Seek reasonable infrastructure support from their institution and supervisor, and use this support effectively
- Ensure that all outlined aspects of training are covered during the defined training period
- Work with their supervisors in writing the synopsis/research proposal and submit the synopsis/research proposal by the end of first year of their registration with the REU
- Accept responsibility for the dissertation and plan to execute the research within the time limits defined
- Be responsible for arranging regular meetings with the supervisor to discuss and document progress. If the Supervisor is not able/willing to meet with the resident on a regular basis, he/she must notify the College
- Provide the supervisor with word processed updated synopsis and dissertation drafts (ensure it has been checked for spelling, grammar and typographical errors, prior to submission) and provide the raw data to the supervisor if required
- Submit completed dissertation to REU for approval, six months before the final FCPS-II examination intended to appear in and REU approval of dissertation one month before the date of commencement of examination
(applicable to January & July 2024 inductees only)
OR
submit evidence of publication/acceptance for publication of one research paper in a CPSP approved journal, along with examination form
- Follow the College complaint procedure if serious problem arises

CURRICULUM: AIM AND OUTCOMES

AIM

The aim of the fellowship programme in Pulmonology is to produce specialists in the field who have attained the required competencies.

OUTCOMES

By the end of the residency programme, the resident will be able to:

- Initially assess the patients seeking advice for symptoms related to respiratory disease by:
 - Obtaining pertinent history
 - Performing physical examinations correctly
 - Formulating a working diagnosis
 - Deciding whether the patient requires:
 - Ambulatory care or hospitalization
 - Referral to other health professionals
 - Managing patients requiring treatment by a pulmonologist. This will include:
 - Planning an enquiry strategy i.e. ordering appropriate investigations and interpreting the results
 - Deciding and implementing suitable treatment
 - Maintaining follow up of patients at required intervals
 - Maintaining records of patients
- Undertake research and publish findings
- Acquire new information, assess its utility, and make appropriate applications
- Recognize the role of teamwork and function as an effective member/leader of the team
- Advise the community on matters related to promoting health and preventing disease
- Train paraprofessionals and other junior members of the team

SYLLABUS

OBSTRUCTIVE AIRWAY DISEASES (OAD)

- Asthma
- COPD
- Obstructive, other than asthma and COPD
 - Cystic fibrosis (CF)
 - Non-CF bronchiectasis
 - Central airway obstruction

PULMONARY INFECTIONS

- Upper respiratory tract infections
- Pneumonia
 - Community-acquired pneumonia (CAP)
 - Hospital-acquired pneumonia (HAP)
 - Ventilator-associated pneumonia (VAP)
 - Aspiration pneumonia
 - Lung abscess
- Tuberculosis & other mycobacterium tuberculosis (MTB) infections
 - Pulmonary
 - Extra-pulmonary
- HIV infection in immunocompromised hosts
- Other infections
 - Viral
 - Fungal
 - Parasitic, etc.

PULMONARY & CRITICAL CARE

- **Respiratory Failure**
Acute & Chronic Respiratory Failure (irrespective of the cause), including ARDS
 - Assessment (need for shifting to the ICU)
 - Monitoring the airway to determine the need for:
 - Assisted ventilation
 - Non-invasive mechanical ventilation
 - Invasive mechanical ventilation
 - Extracorporeal membrane oxygenation & CO₂ removal

- Prediction of outcome including use of prognostic scoring systems
- Weaning strategies
- Critical care ultrasound
- Determination of brain death
- **Non-respiratory Critical Care Shock**
 - Septic shock
 - Cardiogenic shock
 - Distributive shock
 - Hypovolemic shock
 - Anaphylaxis
 - Drug-induced shock
 - Haemorrhagic shock (non-pulmonary haemorrhage)
- **Hypothermia and Hyperthermia**
- **Toxicology**

NEOPLASMS

- Lung cancer
 - Non-small cell lung cancer
 - Small cell lung cancer
- Other intrathoracic tumours
 - Carcinoid tumours
 - Hamartoma
 - Adenoid cystic carcinoma
- Tumours of the mediastinum
 - Thymoma
 - Lymphoma
 - Plasmacytoma
 - Sarcoma
- Metastatic disease
- Malignant pleural disease
 - Mesothelioma
 - Malignant pleural effusion or pleural metastasis
- Complications
 - Paraneoplastic syndromes
 - Superior vena cava syndrome

- Pulmonary nodules
 - Solitary pulmonary nodule
 - Multiple pulmonary nodules
 - Mimics of pulmonary nodules and masses
- Physiologic assessment for thoracic surgery
- Interventional pulmonary medicine and thoracic surgery
- Bronchoscopy, Endobronchial Ultrasound (EBUS), and other interventional airway procedures
- Palliative interventions
- Video-assisted thoracoscopy (VATS) and other surgery
- Lung cancer screening

PLEURAL DISEASES

- **Pleural Effusions**
 - Transudative
 - Hemodynamic
 - Oncotic
 - Hydrothorax
 - Urinothorax and other types
 - Exudative
 - Infectious
 - Occupational
 - Noninfectious
 - Inflammatory
 - Hemorrhagic
 - Chylous
 - Drug-induced
 - Eosinophilic
- **Pneumothorax**
 - Primary spontaneous
 - Secondary
 - Parenchymal disease-related
 - Iatrogenic
 - Traumatic
 - Catamenial
 - Familial, and other types

SLEEP & SLEEP DISORDERS

- Central sleep apnea
- Obstructive sleep apnea
- Insomnia
- Narcolepsy
- Periodic limb movement disorder
- Restless legs syndrome
- Interactions of cardiopulmonary disease and sleep
- Chest wall and skeletal
- Obesity
- Neuromuscular disease
- Ventilatory control

DIFFUSE PARENCHYMAL LUNG DISEASE (DPLD)

- **Interstitial Lung Disease (ILD) Associated with Systemic Inflammatory Disease**
 - Connective tissue disease (CTD) associated ILD
 - Rheumatoid arthritis
 - Systemic sclerosis
 - Polymyositis
 - Dermatomyositis
 - Anti-synthetase syndromes
 - Sjogren syndrome
 - Systemic lupus erythematosus
 - Other connective tissue diseases
- **Inflammatory Bowel Disease Associated (ILD)**
 - IgG4-related disease
 - Other diseases
- **Idiopathic Interstitial Pneumonias**
 - Acute interstitial pneumonia
 - Cryptogenic organizing pneumonia
 - Desquamative interstitial pneumonia
 - Idiopathic pulmonary fibrosis
 - Lymphocytic interstitial pneumonia (LIP)
 - Nonspecific interstitial pneumonia
 - Respiratory bronchiolitis-associated ILD
 - Acute and chronic eosinophilic pneumonias
 - Idiopathic pleuropulmonary fibroelastosis and other conditions

- **Granulomatous Interstitial Lung Diseases**
 - Sarcoidosis
 - Pulmonary
 - Extrapulmonary
 - Hypersensitivity pneumonitis
 - Granulomatous lymphocytic ILD and other conditions

OCCUPATIONAL AND ENVIRONMENTAL DISEASES

- **Managing problems arising due to use of tobacco including cessation of smoking**
- **Occupational asthma: work-exacerbated asthma; indoor and outdoor air pollution**
- **Barometric or thermal disorders**
- **Pneumoconioses**
 - Asbestosis
 - Berylliosis
 - Coal-workers' pneumoconiosis
 - Hard metal pneumoconiosis
 - Silicosis
- **Toxic Inhalations**
 - E-cigarette and vaping-associated lung injury
 - Carbon monoxide
 - Smoke inhalation
 - Other toxic exposures (cobalt, dust, endotoxin, metal fume fever, organic agents)
- **Environmental Cancer Risk**

VASCULAR DISEASES

- **Pulmonary Thromboembolic Disease**
 - Deep venous thrombosis
 - Pulmonary thromboembolism
 - Non-thrombotic pulmonary embolism
 - Infectious thrombophlebitis
- **Pulmonary Hypertension**
 - Pulmonary arterial hypertension
 - Chronic thromboembolic disease
 - Other pulmonary hypertension related to heart or lung disease
 - Right ventricular failure

- **Pulmonary Vasculitis and Capillaries**
 - Granulomatosis with polyangiitis
 - Anti-glomerular basement membrane disease
 - Microscopic polyangiitis & other pulmonary vasculitides
- **Pulmonary Vascular Malformations**
 - Pulmonary arteriovenous malformation
 - Hepatopulmonary syndrome
- **Sickle Cell Disease & Lungs**

LUNG TRANSPLANTATION

- Patient selection & indications
- Pretransplant evaluation
- Transplant immunosuppression
- Complications of lung transplantation
- Outcomes of transplantation

PULMONARY COMPLICATIONS

- Infections
- Neoplastic
- Other complications of organ transplantation (graft-versus-host disease)

RESEARCH

- Study design
- Causal inference
- Sources of error
- Analytic issues
- Screening studies
- Diagnostic studies

INFECTION PREVENTION AND CONTROL (IPC)

PANDEMIC RESPONSE

- Awareness and preparedness for any pandemic disease

RECOMMENDED TEACHING AND LEARNING METHODOLOGIES

- Simulation-based training
- Work-based experiential learning:
 - Pulmonology outpatient clinics
 - Grand rounds
 - Bed-side teaching
 - Multi-disciplinary team meetings
 - Lectures
 - Small group discussions
 - Self-directed learning

CORE COMPETENCIES

The competencies, a specialist must have, are varied and complex. A list of competencies is given below. The level of competencies to be achieved each year is specified according to the given key:

1. Observer Status
2. Assistant Status
3. Performed Under Supervision
4. Performed Independently

COMPETENCIES	THIRD YEAR										TOTAL NO. OF CASES
	03 MONTHS		06 MONTHS		09 MONTHS		12 MONTHS				
	LEVEL	CASES	LEVEL	CASES	LEVEL	CASES	LEVEL	CASES			
CLINICAL COMPETENCIES											
• ELICIT PERTINENT HISTORY	4		4		4		4		4		150
• PERFORM PHYSICAL EXAMINATION	4		4		4		4		4		
• ORDER APPROPRIATE INVESTIGATIONS	3	30	4	40	4		4	40	4	40	
• INTERPRET THE RESULTS OF INVESTIGATIONS	2		2		3		3		3		
• DECIDE & IMPLEMENT APPROPRIATE TREATMENT	2		2		3		3		3		
• MAINTAIN FOLLOWUP	3		3		4		4		4		
PROCEDURAL COMPETENCIES											
THORACIC ULTRASOUND	1	10	1	10	2	10	2	10	2	10	40
PLEURAL ASPIRATION	2	10	3	10	4	10	4	10	4	10	40
PLEURAL BIOPSY	2	5	2	5	3	5	3	5	3	5	20
CHEST TUBE INSERTION	2	5	2	5	3	5	3	5	3	5	20
BRONCHOSCOPY	2	10	2	10	2	10	2	10	2	10	40
PLEUROSCOPY	1	3	1	3	2	4	2	4	2	5	15

COMPETENCIES	FOURTH YEAR								TOTAL NO. OF CASES
	15 MONTHS		18 MONTHS		21 MONTHS		24 MONTHS		
	LEVEL	CASES	LEVEL	CASES	LEVEL	CASES	LEVEL	CASES	
CLINICAL COMPETENCIES									
PROCEDURAL COMPETENCIES									
	2	10	2	10	3	10	3	10	40
	4	10	4	10	4	10	4	10	40
	4	5	4	5	4	5	4	5	20
	4	5	4	5	4	5	4	5	20
	2	10	2	10	2	10	2	10	40
PLEUROSCOPY	2	5	2	5	2	5	2	5	20

COMPETENCIES		FIFTH YEAR								TOTAL NO. OF CASES
		27 MONTHS		30 MONTHS		33 MONTHS		36 MONTHS		
		LEVEL	CASES	LEVEL	CASES	LEVEL	CASES	LEVEL	CASES	
CLINICAL COMPETENCIES • ELICIT PERTINENT HISTORY • PERFORM PHYSICAL EXAMINATION • ORDER APPROPRIATE INVESTIGATIONS • INTERPRET THE RESULTS OF INVESTIGATIONS • DECIDE & IMPLEMENT APPROPRIATE TREATMENT • MAINTAIN FOLLOWUP										
		4	30	4	30	4	30	4	30	120
PROCEDURAL COMPETENCIES										
THORACIC ULTRASOUND		3	10	4	10	4	10	4	10	40
PLEURAL ASPIRATION		4	10	4	10	4	10	4	10	40
PLEURAL BIOPSY		4	5	4	5	4	5	4	5	20
CHEST TUBE INSERTION		4	5	4	5	4	5	4	5	20
BRONCHOSCOPY		2	10	2	10	3	10	3	10	40
PLEUROSCOPY		2	5	3	5	3	5	3	5	20

ROTATIONAL COMPETENCIES

CRITICAL CARE MEDICINE/INTENSIVE CARE UNIT (03 MONTHS)

COMPETENCIES		
	Level	Cases
DIAGNOSE RESPIRATORY FAILURE	3	10
	4	10
APPLICATION OF NON-INVASIVE VENTILATION (NIV)	1	5
	2	5
	3	5
	4	5
APPLICATION OF HIGH-FLOW NASAL OXYGEN (HFNO)	1	5
	2	5
	3	5
	4	5
INITIATE MECHANICAL VENTILATION	1	5
	2	5
	3	5
	4	5
DIAGNOSE AND MANAGE ARRHYTHMIAS	1	5
	2	5
	3	5
	4	5
DIAGNOSE AND MANAGE SHOCK	1	5
	2	5
	3	5
	4	5
DIAGNOSE AND MANAGE ACUTE RESPIRATORY DISTRESS SYNDROME (ARDS)	3	10
	4	10

CARDIOLOGY (01 MONTH)

COMPETENCIES		
	Level	Cases
ELICIT PERTINENT HISTORY IN OPD	4	8
PERFORM PHYSICAL EXAMINATION IN OPD	4	8
ORDER APPROPRIATE INVESTIGATIONS IN OPD	3	8
INTERPRET THE RESULTS OF INVESTIGATIONS IN OPD	2	8
DECIDE & IMPLEMENT APPROPRIATE TREATMENT	2	8
ELICIT PERTINENT HISTORY IN WARD	4	16
PERFORM PHYSICAL EXAMINATION IN WARD	4	16
ORDER APPROPRIATE INVESTIGATIONS IN WARD	4	16
INTERPRET THE RESULTS OF INVESTIGATIONS IN WARD	3	16
DECIDE & IMPLEMENT APPROPRIATE TREATMENT	2	16
INTERPRET:		
ELECTROCARDIOGRAMS (ECG)	2	5
	3	5
	4	10
ECHO-CARDIOGRAMS (ECHO)	1	5
	2	5
	3	10
EXERCISE TOLERANCE TEST (ETT)	1	3
	2	3
ANGIOGRAPHS	1	5
ARRHYTHMIAS	1	5
	2	5
	3	5
	4	5

THORACIC SURGERY (01 MONTH)

COMPETENCIES		
	Level	Cases
ELICIT PERTINENT HISTORY IN OPD	4	6
PERFORM PHYSICAL EXAMINATION IN OPD	4	6
ORDER APPROPRIATE INVESTIGATIONS IN OPD	4	6
INTERPRET THE RESULTS OF INVESTIGATIONS IN OPD	3	6
DECIDE & IMPLEMENT APPROPRIATE TREATMENT	2	6
ELICIT PERTINENT HISTORY IN WARD	4	12
PERFORM PHYSICAL EXAMINATION IN WARD	4	12
ORDER APPROPRIATE INVESTIGATIONS IN WARD	4	12
INTERPRET THE RESULTS OF INVESTIGATIONS IN WARD	3	12
DECIDE & IMPLEMENT APPROPRIATE TREATMENT	2	12
PRE-OPERATIVE CARE	1	5
	2	5
	3	5
	4	5
POST-OPERATIVE CARE	1	5
	2	5
	3	5
	4	5
MAJOR OPERATIONS	1	5
	2	5
COMPLICATIONS MANAGEMENT	2	5
	3	5
	4	5
CHEST INTUBATIONS AND PLEURODESIS	1	5
	2	5
	3	5
	4	5

DIAGNOSTIC RADIOLOGY (01 MONTH)

COMPETENCIES		
	Level	Cases
INTERPRET:		
CHEST RADIOGRAPHS (CXR)	3	10
	4	10
ULTRASOUND SONOGRAPHS (USG) [CHEST]	1	5
	2	5
	3	5
	4	5
HIGH-RESOLUTION COMPUTED TOMOGRAPHS (HRCT)	1	5
	2	5
	3	5
	4	5
CONTRAST-ENHANCED COMPUTED TOMOGRAPHS (CECT) [CHEST]	1	5
	2	5
	3	5
	4	5
POSITRON EMISSION TOMOGRAPHS (PET) SCANS	1	5
	2	5
X-RAYS (PARA NASAL SINUSES [PNS])	1	5
	2	5
	3	5
	4	5

ASSESSMENT

FORMATIVE ASSESSMENT

College of Physicians and Surgeons Pakistan, in order to implement competency based education in letter and spirit, is introducing Work Placed Based Assessment (WPBA) in addition to institutional/ departmental assessments. To begin with college is introducing Mini-CEX and DOPS to ensure that the graduates are fully equipped with the clinical competencies.

Mini Clinical Evaluation Exercise (Mini-CEX)

During Post-IMM training in FCPS Pulmonology, at least one Mini-CEX in each quarter is to be conducted as per the earmarked topics given below:

- Mini-CEX is entirely a formative tool of assessment and is to be accompanied with constructive feedback
- Each Mini-CEX encounter extends for about 20 minutes with 05 minutes for feedback and further action plan
- The topics given below are to be covered accordingly focusing each time on a different area/topic depending on the availability of cases.
- The resident has the onus to report to the Supervisor when he/she is prepared to appear for Mini-CEX
- The Supervisor will arrange for the session of Mini-CEX and after completing the session will retrieve online prescribed assessment form (sample given below), fill it and make entries online (e-portal)
- In case of unsatisfactory performance of the resident, a remedial has to be completed within stipulated time frame
- Non-compliance by the resident has to be reported in quarterly feedback.

Topics for Mini-CEX

Mini-CEX encounters will be arranged (by the Supervisor) to cover/assess skills essential to provision of good clinical care including History taking, Physical Examination, Management & Communication skills.

1st year (R3)

- Asthma
- Chronic Obstructive Pulmonary Disease (COPD)
- Pneumonia
- Pulmonary Tuberculosis
- Lung Abscess

2nd year (R4)

- Pleural Effusion
- Pneumothorax
- Bronchiectasis
- Respiratory Failure
- Lung Cancer

3rd year (R5)

- Interstitial Lung Disease (ILD)
- Sleep Apnoea
- Valvular Heart Disease
- Pulmonary Thromboembolism
- Mediastinal Tumors



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MINI CLINICAL EVALUATION EXERCISE (CEX)

SPECIALTY: FCPS PULMONOLOGY

Time Duration = 20 mins (15 mins assessment and 5 mins feedback)

PLEASE COMPLETE THE QUESTIONNAIRE BY FILLING/CHECKING APPROPRIATE BOXES

Assessor: _____ Assessment Date: _____

Resident's Name: _____

Hospital Name: _____ R&RC Number: _____

Year of Residency: ☐ R3 ☐ R4 ☐ R5

Quarter: ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th

Setting: ☐ Ward ☐ Outdoor (Hospital/Community) Other: _____

Diagnosis of Patient: _____ Patient Age: _____ Sex: _____

Clinical Area: _____

Complexity of Case/ Procedure: ☐ Low/Easy ☐ Moderate/Average ☐ High/Difficult ☐ N/A

Focus of Clinical Encounters: ☐ History taking ☐ Physical Examination ☐ Management

☐ Communication Skills ☐ Other: _____

Please grade the following areas on the given scale:	Not Observed / Applicable	Below Expectations		Satisfactory	Above Expectation	Excellent
		1	2	3	4	5
Informed Consent of patient						
Interviewing Skills						
Systematic Progression						
Presentation of positive & significant negative findings						
Justification of actions						
Professionalism						
Organization/Efficiency						
Overall clinical competence						

Assessor's Satisfaction with Mini-CEX:

(Low) 1 2 3 4 5 (High)

Resident's Satisfaction with Mini-CEX:

(Low) 1 2 3 4 5 (High)

Strengths	Suggestions for Improvement

Encounter to be repeated ☐ YES ☐ NO

Signature _____

Direct Observation of Procedural Skills (DOPS)

During Post-IMM training in FCPS Pulmonology, at least one DOPS in each quarter is to be conducted as per the earmarked topics given below.

- DOPS is entirely a formative tool of assessment and is to be accompanied with constructive feedback
- Each DOPS encounter extends for about 20 minutes with 05 minutes for feedback and further action plan
- The topics given below are to be covered accordingly, focusing each time on a different procedure/topic
- The resident has the onus to report to the Supervisor when he/she is prepared to appear for DOPS
- If the Supervisor/Assessor feels that the DOPS assessment of a particular procedure selected from the given list, would take longer than the prescribed time of 15 minutes for the performance and assessment, then essential steps of the procedure or part of the procedure may be mutually agreed upon between the Resident & Assessor/Supervisor and DOPS may be conducted accordingly
- The Supervisor will arrange for the session of DOPS and after completing the session will retrieve online prescribed assessment form (sample given below), fill it and make entries online (e-portal)
- In case of unsatisfactory performance of the resident, a remedial has to be completed within stipulated time frame
- Non-compliance by the resident has to be reported in quarterly feedback

1st year (R3)

- Cardiopulmonary Resuscitation (CPR) + / - Endotracheal intubation on a patient as a member and team leader
- Inhalation Techniques :
 - Metered Dose Inhaler (MDI), Self-demonstration and /or Patient training
 - Dry-powder Inhaler (DPI), Self-demonstration and /or Patient training
 - Nebulization – preparation of various solutions, instructions and provision of relevant information to Patients

- Pleural Fluid Aspiration (Thoracentesis):
 - Diagnostic
 - Therapeutic
- Chest Intubation (ICT insertion) & placement of Indwelling Catheters: Routine care and Management of Complications

2nd year (R4)

- Chemical Pleurodesis
- Pleural Biopsy
- Oxygen Therapy Using:
 - Ordinary or High Flow Nasal Cannula
 - Masks, Ordinary / Venturi
- Arterial Blood Gases: Sampling, Performing and Trouble shooting
- Insertion of Arterial Line and Central Venous Pressure (CVP) Line
- Pulmonary Function Tests:
 - Peak Expiratory Flow (PEF)
 - Spirometry

3rd year (R5)

- Ultrasound Chest
- Percutaneous Lung Biopsy:
 - Blind
 - Ultrasound-guided
 - CT-guided
- Bronchoscopy and Related Procedures like:
 - Biopsy
 - Washings
 - Brushing
 - Bronchoalveolar Lavage (BAL)
- Non-Invasive Ventilation: CPAP, BiPAP
 - Initiation
 - Patient &/ Attendant briefing
 - Follow up / Maintenance
 - Management of Complication(s)
 - Trouble shooting

- Invasive ventilation (during ICU Rotations or in parent department with mutual agreement)
 - Initiation
 - Follow up / Maintenance
 - Management of Ventilatory Complication(s)
 - Weaning from Ventilator
- Pleuroscopy (if available in Pulmonology or Thoracic Surgery Department)



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DIRECT OBSERVATION OF PROCEDURAL SKILLS (DOPS)

SPECIALTY: FCPS PULMONOLOGY

Time Duration = 20 mins (15 mins assessment and 5 mins feedback)

PLEASE COMPLETE THE QUESTIONNAIRE BY FILLING/CHECKING APPROPRIATE BOXES

Assessor: _____ Assessment Date: _____

Resident's Name: _____

Hospital Name: _____ R&RC Number: _____

Year of Residency: ☐ R3 ☐ R4 ☐ R5

Quarter: ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th

Setting: ☐ O.T. ☐ Procedure Room Other: _____

Diagnosis of Patient: _____ Patient Age: _____ Sex: _____

Name of Procedure: _____

Complexity of Case/ Procedure: ☐ Low/Easy ☐ Moderate/Average ☐ High/Difficult ☐ N/A

Number of times procedure performed by Resident: _____

Please grade the following areas on the given scale:	Not Observed / Applicable	Below Expectations		Satisfactory	Above Expectation	Excellent
		1	2	3	4	5
Indications, anatomy & steps of procedure						
Informed consent, with explanation of procedure and complications						
Preparation for procedure						
Use of Anesthesia, Analgesia or sedation						
Observance of asepsis						
Safe use of instruments						
Use of accepted techniques						
Management of unexpected event (or seeks help)						
Post-procedure instructions to patient and staff						
Professionalism						
Overall ability to perform whole procedure						

Assessor's Satisfaction with DOPS:

(Low) 1 2 3 4 5 (High)

Resident's Satisfaction with DOPS:

(Low) 1 2 3 4 5 (High)

Strengths	Suggestions for Improvement

Encounter to be repeated ☐ YES ☐ NO

Signature

SUMMATIVE ASSESSMENT

The eligibility requirements for residents appearing in FCPS-II Pulmonology examination are:

- To have passed FCPS Part-I in Medicine & Allied or been granted official exemption
- To have undertaken two years training in Intermediate Module in Medicine and Allied
- To have undertaken three years of RTMC registered training in Pulmonology
- To provide certificate of having passed the Intermediate Module Examination in Medicine and Allied
- To have completed entries in e-logbook along with validation by the supervisor
- To have completed CPSP mandated Mini-CEX & DOPS in e-logbook (***applicable to residents entering in Pulmonology training from January 2024 and onwards***)
- To provide a certificate of attendance of mandatory workshops
- To provide a certificate of approval of dissertation (***applicable to January & July 2024 inductees only***) or acceptance of one research paper, which must accompany the application form

EXAMINATION SCHEDULE

- CPSP theory examinations may be held once or twice a year depending upon the number of candidates
- Theory examinations are held in various cities of the country usually at Abbottabad, Bahawalpur, Faisalabad, Hyderabad, Islamabad, Karachi, Lahore, Larkana, Nawabshah, Multan, Peshawar, Quetta and Rawalpindi centers. The College shall decide where to hold oral/practical examination depending on the number of candidates in a city and shall inform the candidates accordingly
- English shall be the medium of examination for the theory/practical/clinical and viva examinations
- The College will notify of any change in the centers, the dates and format of the examination
- A competent authority appointed by the college has the power to debar any candidate from any examination if it is satisfied that such a candidate is not a fit person to take the College examination because of using unfair means in the examination, misconduct or other disciplinary reasons

- Each successful candidate in the fellowship examination shall be entitled to the award of a College Diploma after being elected by the College Council and payment of registration fees and other dues

EXAMINATION FEES

- Fees deposited for a particular examination shall not be carried over to the next examination in case of withdrawal/absence/exclusion
- Applications along with the prescribed examination fees and required documents must be submitted by the last date notified for this purpose before each examination
- The details of examination fee & fees for change of centre, subject, etc. shall be notified before each examination

REFUND OF FEES

If, after submitting an application for examination, a resident decides not to appear, a written request for a refund must be submitted before the last date for withdrawal with the receipt of applications. In such cases a refund is admissible to the extent of 75% of fees only. No request for refund will be accepted after the closing date for receipt of applications. If an application is rejected by the CPSP, 75% of the examination fee will be refunded, the remaining 25% being retained as a processing charge. No refund will be made for fees paid for any other reason, e.g. late fee, change of centre/subject fee, etc.

FORMAT OF EXAMINATIONS

Every candidate applying for the fellowship of the College of Physicians and Surgeons Pakistan must pass both parts of the Fellowship examination unless exemption is approved. Since the College is continually seeking to improve its examinations, changes are likely from time to time and candidates will be notified in advance of such changes.

Theory Examination

The written examination consists of two papers:

Paper-I: 100 Single Best Type MCQs

Paper-II: 100 Single Best Type MCQs

Only those candidates who qualify in the theory will be eligible to take the TOACS examination.

Clinical Examination:

The Clinical section comprises two components:

- **First Component:**
 - TOACS: 15-20 Stations
- **Second Component:**
 - One Long Case
 - Four Short Cases

Only those candidates who pass through TOACS examination will be allowed to appear in the remaining components of clinical examination.

FORMAT OF TOACS

Task Oriented Assessment of Clinical Skills (TOACS) has been introduced since November, 2001 in FCPS examinations. The number of TOACS stations will range from 15-20. However, the number can be increased if deemed necessary. All stations are required to be "Interactive". At these stations, the residents will be required to perform a task, for example, taking history, performing clinical examination, counseling, assembling an instrument or any other task. One examiner will be present at each interactive station and will rate the performance of the resident and ask questions testing critical thinking and problem-solving skills.

FORMAT OF LONG CASE

Each candidate will be allotted one long case of 60 minutes duration. The first 30 minutes are reserved for history-taking and clinical examination, during which the candidate will take a careful history from the patient (or relative), perform a thorough physical examination, and identify the patient's problems. During this period, the candidate will be observed by a pair of examiners. Case presentation and discussion on the long case will follow the 30-minute patient interaction session and will be conducted jointly by the pair of examiners for a further 30 minutes. The candidate is assessed on the following areas during the long case:

Interviewing Skills

- Introduces one self. Listens patiently and is polite with the patient
- Is able to extract relevant information

Clinical Examination Skills

- Takes informed consent
- Uses correct clinical methods in a systematic manner (including appropriate exposure and re-draping)

Case Presentation / Discussion

- Presents skillfully
- Gives correct findings
- Gives logical interpretations of findings and discusses differential diagnosis
- Enumerates and justifies relevant investigations
- Outlines & justifies treatment plan (including rehabilitation)
- Discusses prevention and prognosis
- Has knowledge of recent advances relevant to the case
- During case discussion the candidate may ask the examiners for laboratory investigations which shall be provided, if available. Even if they are not available and are relevant, candidates will receive credit for the suggestion

FORMAT OF SHORT CASES

Candidates will be examined in at least four short cases for a total of 40 minutes jointly by a pair of examiners. Candidates will be given a specific task to perform on patients, one case at a time. During this part of the examination, the candidate will be assessed in:

Clinical Examination Skills

- Takes informed consent
- Uses correct clinical methods
- Examines systematically

Discussion

- Gives correct findings
- Gives logical interpretations of findings
- Justifies diagnosis/es

As the time for this section is short, the answers given by the candidates should be precise, succinct and relevant to the patient under discussion.

NOTE: The resident is required to fill a self-explanatory 'feedback proforma' at the end of the examination.

THE COLLEGE RESERVES THE RIGHT TO ALTER/AMEND ANY RULES /REGULATIONS

Any decision taken by the College on the interpretation of these regulations will be binding on the applicant.

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COLLEGE OF PHYSICIANS AND SURGEONS PAKISTAN

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